Before the
Federal Communications Commission
Washington DC 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	
Regarding Dedicated Short-Range	)	WT Docket No. 01-90
Communication Services in the	)	
5.850-5.925 GHz Band (5.9 GHz Band)	)	
	)	
Amendment of Parts 2 and 90 of the	)	
Commission's Rules to Allocate the	)	ET Docket No. 98-95
5.850-5.925 GHz Band to the Mobile Service	)	RM-9096
for Dedicated Short Range Communications	)	
of Intelligent Transportation Services	)	

REPLY COMMENTS OF INTERSIL CORPORATION

Respectfully submitted,

Mitchell Lazarus
FLETCHER, HEALD & HILDRETH, P.L.C.
1300 North 17th Street, 11th Floor
Arlington, VA 22209
703-812-0440
Counsel for Intersil Corporation

April 15, 2003

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	
Regarding Dedicated Short-Range	)	WT Docket No. 01-90
Communication Services in the	)	
5.850-5.925 GHz Band (5.9 GHz Band)	)	
	)	
Amendment of Parts 2 and 90 of the	)	
Commission's Rules to Allocate the	)	ET Docket No. 98-95
5.850-5.925 GHz Band to the Mobile Service	)	RM-9096
for Dedicated Short Range Communications	)	
of Intelligent Transportation Services	)	

REPLY COMMENTS OF INTERSIL CORPORATION

Intersil Corporation files these reply comments in response to the above-captioned Notice of Proposed Rulemaking and Order concerning Dedicated Short-Range Communication Services (DSRC).[1] Intersil is a manufacturer of complete wireless LAN chipsets. Worldwide sales for wireless LAN chipsets in 2002 were 22-24 million radios (most sold in the U.S.), expected to double in 2003. Intersil expects to participate in the market for DSRC devices.

A. Intersil Positions

Intersil's first-round comments set out the following:

- ***No auctions***. Intersil strongly opposes auctioning geographic licenses. DSRC will attract large numbers of operators. Requiring them to buy spectrum rights from geographic licensees will only add unneeded obstacles to deployment.

- ***Flexible scope***. The Commission should define DSRC so as to admit the broadest range of applications, limited only by the general scope of intelligent transportation services. Eligibility should be similarly broad. Diverse

---

[1] *Dedicated Short-Range Communication Services in the 5.850-5.925 GHz Band*, 17 FCC Rcd 23136 (2002) (Notice).

applications and eligibility will encourage product development and bring down equipment costs for all users, including public safety.

- ***Technical issues***. The Commission should require the ASTM E2213-02 standard to promote DSRC interoperability, and should adopt the Mark IV proposal to increase permitted output power, while leaving maximum EIRP unchanged.

- ***Licensing regime***. Road-side units (RSUs) should be licensed by rule, subject to prior coordination using an automated website. On-board unites (OBUs) should be regulated as unlicensed devices under Part 15.

B. Reply to Comments

1. No auctions

Among approximately 35 first-round comments, there is *no* support for auctioning the DSRC spectrum. The Commission should abandon this proposal.[2]

2. Flexible scope

Nearly all of the comments favor a mix of public safety and private services. Most agree with Intersil that private use will lead to better and less expensive equipment for public safety.[3] A few parties favor limiting DSRC to public safety in order to prevent congestion, although some would still set aside part of the spectrum for private use.[4] Others would put private use on a secondary basis to public safety.[5]

---

[2] Indeed, U.S. Supreme Court precedent bars the 6 Commission from adopting a rule that has no support in the record. "[A]n agency rule would be arbitrary and capricious if the agency . . . offered an explanation for its decision that runs counter to the evidence before the agency . . . ." *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto Ins.*, 463 U.S. 29, 43 (1983).

[3] *E.g.* New York State Thruway Authority at 4.

[4] *E.g.*, Comments of Public Safety Wireless Network Program at 5-6.

[5] *E.g.*, National Association of Telecommunications Officers and Advisors and the National League of Cities at 6. A secondary service is one that may not interfere with, and must accept interference from, a primary service. *See* 47 C.F.R. Sec. 90.7.

We think concerns about congestion are misplaced. The 75 MHz of spectrum at issue is enough to provide for a large number of near-simultaneous operations at the same location. And the low power limits for DSRC will result in short operating ranges, which provide for a high level of frequency re-use and accommodate large numbers of users on the same frequency. There is no need to restrict applications to avoid crowding. Similarly, because DSRC can accommodate many users in a small area, there is no need to make primary operation secondary to public safety.

3. Technical issues

All of the parties commenting on technical standards favor the adoption of ASTM E2213-02. Most note that this standard will increase interoperability. Some further agree with us that interoperability in turn will promote quantity manufacture, and hence bring down equipment costs for all users.[6]

No party opposes the Mark IV proposal for the present maximum EIRP at higher output power and hence using a less directional antenna.

4. Licensing regime

The major disagreements among commenters center on mode of licensing. Some parties favor frequency-coordinated site-specific licensing for RSUs, and license by rule for OBUs.[7] A

---

[6] *E.g.*, TransCore Corporation at 4.

[7] *E.g.* E-Zpass Interagency Group at 9-12. *See also* International Bridge, Tunnel & Turnpike Ass'n at Sec. 7 (licensing OBUs by rule); New York State Thruway Authority at 10 (same); Nissan Motor Company, Ltd. (pages not numbered) (same).

few would license OBUs only to corresponding RSUs.[8] Several warn specifically against unlicensed operation of OBUs.[9]

Those favoring site-specific licensing are generally concerned about interference among RSUs. The solution to that problem, however, is not individual licensing as such, but mandatory frequency coordination. Intersil has proposed a scheme that provides for frequency coordination without the overhead and delays of site licensing.[10]

At least some of those opposing unlicensed operation of OBUs underestimate the technical control available under Part 15. One comment, for example, objects that "Part 15 does not mandate adequate power, power control, clock stability or channel control to satisfy the proposed DSRC architecture."[11] Although some Part 15 devices are subject only to power

---

[8] Public Safety Wireless Network Program at 11; International Bridge, Tunnel & Turnpike Ass'n at Sec. 6.

[9] *E.g.*, Johns Hopkins University at 13.

[10] Intersil proposed frequency-coordinated licensing by rule: "Using a commercially-operated private website, an RSU applicant would enter the proposed station data (coordinates or area of operation, power, center frequency, bandwidth, etc.), together with a fee payment to cover the costs of coordination. The website software and its associated database, which contains all earlier-coordinated stations, would either clear the requested station immediately, or else email the data automatically to potentially affected users, who would have a short time in which to object. . . . Once coordination is complete, the applicant can begin transmission immediately under a license-by-rule regime. Individual sites would not be licensed; users would not have a call sign; and the Commission would keep no record of the station data. In lieu of license renewal, we suggest a requirement that the coordinator contact each user periodically by automatic email to seek confirmation that the station is still operating. Users that do not respond, after follow-ups, would have their stations dropped from the coordination database." Comments of Intersil Corp at 10.

[11] Johns Hopkins University at 13.

limits,[12] others operate under extremely detailed technical rules.[13] There is extensive precedent for controlling any needed transmitter characteristics under Part 15.

As we noted earlier, the rules should allow any OBU to communicate with any RSU and any other OBU. Indeed, some OBUs may not be related to any RSU. The operator of a particular RSU may choose not to respond to communications from nonaffiliated OBUs, but that should be the operator's choice, not one imposed by the Commission.

CONCLUSION

The public needs DSRC services. We urge the Commission to adopt rules promptly that offer a flexible approach and a licensing scheme that gets users on the air with minimum cost and delay.

Respectfully submitted,

Mitchell Lazarus
FLETCHER, HEALD & HILDRETH, P.L.C.
1300 North 17th Street, 11th Floor
Arlington, VA 22209
703-812-0440
Counsel for Intersil Corporation

April 15, 2003

---

[12] 47 C.F.R. Sec. 15.209.

[13] *See, e.g.*, 47 C.F.R. Secs. 15.247 (spread spectrum and digital modulation), 15.255 (57-64 GHz), 15.501 *et seq*. (ultra-wideband).

SERVICE LIST

Chairman Michael Powell
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Commissioner Jonathan S. Adelstein
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Commissioner Kathleen Q. Abernathy
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Commissioner Michael J. Copps
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Commissioner Kevin J. Martin
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

WIRELESS TELECOMMUNICATIONS BUREAU

John Muleta
Bureau Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

D'Wana R. Terry, Chief
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Ramona Melson, Deputy Chief (Legal)
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Herb Zeiler, Deputy Chief (Technical)
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Jeanne Kowalski
Deputy Chief (Public Safety)
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

John Borkowski, Assistant Division Chief
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Nancy M. Zaczek
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Gerardo Mejia
Public Safety and Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Alan J. Scrime, Chief
Policy and Rules Division
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

John A. Reed
Senior Electronics Engineer
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

OFFICE OF ENGINEERING & TECHNOLOGY

Edmond J. Thomas, Chief
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Julius Knapp, Deputy Chief
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Bruce A. Franca, Deputy Chief
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Bruce A. Romano
Associate Chief (Legal)
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554